

# **Exhibit 5**

**UNITED STATES DISTRICT COURT  
DISTRICT OF MASSACHUSETTS**

SINGULAR COMPUTING LLC,

Plaintiff,

v.

GOOGLE LLC,

Defendant.

Civil Action No. 1:19-cv-12551-FDS

Hon. F. Dennis Saylor IV

**SINGULAR COMPUTING LLC'S SUPPLEMENTAL RESPONSE  
TO INTERROGATORY NO. 5**

Plaintiff, Singular Computing LLC ("Singular"), supplements its response to  
interrogatory no. 5 as follows;

**INTERROGATORY NO. 5**

If you contend that you are entitled to any monetary recovery as a result of alleged infringement of the Patents-in-Suit by Google, state whether you contend that you are entitled to lost profits or a reasonable royalty, and state all facts, evidence, and reasons upon which you rely in support of your contentions, such that if you contend you are entitled to an award of lost profits damages, you identify each of your products you allege falls within the scope of any claim of the Patents-in-Suit and state the total sales annually in units and dollars from its introduction to the present, and if you contend you are entitled to an award of reasonable royalty damages, state what you assert to be a reasonable royalty to be paid by Google under 35 U.S.C. section 284, including the complete factual bases on which you base your calculation of such royalty rate.

**SUPPLEMENTAL RESPONSE TO INTERROGATORY NO. 5**

Singular incorporates herein its previously-stated specific and general objections to this  
interrogatory no. 5 and its Initial Disclosures served on Google on July 2, 2020. Subject thereto,  
Singular further responds as follows:

Google has substantially impaired Singular's ability to respond to this interrogatory by  
failing to produce documents requested in Singular's damages-related Requests for Production

(“RFP”) (*e.g.*, RFP Nos. 38-41, 49-52, 58), as Singular has repeatedly addressed, *inter alia*, in the following correspondence:

Letter from Dan McGonagle to Matthias Kamber dated April 6, 2021;  
Email from Dan McGonagle to Christopher Sun *et al.* dated April 14, 2021;  
Letter from Dan McGonagle to Jay Rappaport *et al.* dated April 15, 2021;  
Meet-and-confer on April 16, 2021 (Dan McGonagle/Christopher Sun *et al.*); and  
Letter from Dan McGonagle to Christopher Sun *et al.* dated April 27, 2021.

For example, Google has not produced documents reflecting the number of accused products made, used and/or sold, the profitability etc. of the accused products, the benefits to Google resulting from the use of the accused products, or patent license agreements requested by Singular, including those apparently entered into with (among others) InterDigital, Samsung, LG, Apache and Stanford University. Google’s May 7 (non-)responses to Singular’s interrogatories regarding damages further exacerbate the problem with Google’s failure to comply with its discovery obligations to date.

Damages in a patent case are intended to fully compensate the patent owner for the infringer’s unlawful use of the patented invention. *See Mentor Graphics Corp. v. EVE-USA, Inc.*, 851 F.3d 1275, 1283 (Fed. Cir. 2017) (“damages adequate to compensate” under Section 284 means “full compensation for ‘any damages’ [the patent owner] suffered as a result of the infringement”) (quoting *Gen. Motors Corp. v. Devex Corp.*, 461 U.S. 648, 654 (1983)). Thus, the statutory minimum measure of damages under 35 U.S.C. § 284 is a reasonable royalty. *See, e.g., State Indus., Inc. v. Mor-Flo Indus., Inc.*, 883 F.2d 1573, 1577 (Fed. Cir. 1989) (“the floor for a damage award is no less than a reasonable royalty”); *see also Veracode, Inc. v. Appthority, Inc.*, 137 F. Supp. 3d 17, 72 (D. Mass. 2015).

In assessing damages, the parties assume that patents-in-suit are not invalid and that the accused TPU v.2 and v.3 devices infringe the asserted claims of the patents-in-suit. *See, e.g.,*

*Prism Techs. LLC v. Sprint Spectrum L.P.*, 849 F.3d 1360, 1369 (Fed. Cir. 2017). As “the law does not require that an infringer be permitted to make a profit,” *Monsanto Co. v. Ralph*, 382 F.3d 1374, 1384 (Fed. Cir. 2004), “[t]here is no rule that a royalty be no higher than the infringer’s net profit margin.” *State Indus.*, 883 F.2d at 1580 (citation omitted). Any doubts about the amount of the damages must be resolved against the infringer. *Lam, Inc. v. Johns-Manville Corp.*, 718 F.2d 1056, 1065 (Fed. Cir. 1983); *see also Veracode*, 137 F. Supp. 3d at 72.

The Court of Appeals for the Federal Circuit has identified “analytical approaches” as an acceptable method for determining reasonable royalty damages in patent infringement actions. *See, e.g., TWM Mfg. Co., Inc. v. Dura Corp.*, 789 F.2d 895 (Fed. Cir. 1986); *Lucent Techs., Inc. v. Gateway, Inc.*, 580 F.3d 1301 (Fed. Cir. 2009); *Wordtech Sys., Inc. v. Integrated Network Sol’s, Inc.*, 609 F.3d 1308 (Fed. Cir. 2010); *Energy Transport. Grp., Inc. v. William Demant Holding A/S*, 697 F.3d 1342 (Fed. Cir. 2012). Typically, these methods compare the benefit or returns the infringer has obtained from the use of the patented technology with its other products, or some other benchmark. In this case, Singular’s damages expert(s) may determine a reasonable royalty through an “analytical approach,” which would determine the incremental profits anticipated or earned by Google (measured as a reduction in costs and/or an increase in profits) that can be attributable to the use of the patented technologies as compared to other technologies or benchmarks.

Another approach to determining a reasonable royalty is the hypothetical negotiation construct, which considers the royalty that Singular and Google would have agreed upon at the time infringement began via a hypothetical willing licensor/willing licensee negotiation. The hypothetical negotiation is often analyzed by considering the so-called *Georgia-Pacific* factors.

*See, e.g., Dow Chem. Co. v. Mee Indus., Inc.*, 341 F.3d 1370, 1382 (Fed. Cir. 2003); *see also SiOnyx, LLC v. Hamamatsu Photonics K.K.*, 330 F. Supp. 3d 574, 597-98 (D. Mass. 2018).

Under the *Georgia-Pacific* factors, numerous data points are relevant to the reasonable royalty, including, but not limited to: (i) licenses comparable to a license under the patents-in-suit; (ii) financial data related to use of the accused products; (iii) financial data related to sales of comparable products; (iv) surveys and other quantitative and qualitative analyses related to the value of the relevant technology and its use; (v) the defendant's statements and actions related to the relevant technology and accused products; (vi) third parties' statements and actions related to the relevant technology and accused products; and (vii) any other evidence relevant under the *Georgia-Pacific* framework.<sup>1</sup>

Singular anticipates that its damages expert(s) will conduct a thorough *Georgia-Pacific* analysis that will include evaluation of (among other data points): prior licenses given or taken by the parties; their respective financial and competitive positions; the technological and economic benefits provide by the patents-in-suit to the accused products, and industry licensing.

While the details on the precise structure and amount of a reasonable royalty is subject to expert opinion, the reasonable royalty that will be claimed as damages will be properly apportioned to reflect the "claimed invention's footprint in the market place." *See, e.g., ResQNet.com, Inc. v. Lansa, Inc.*, 594 F.3d 860 (Fed. Cir. 2010). Furthermore, the royalty base and the data on which it can be calculated can be determined by reviewing Google's prior incomplete and upcoming document production(s), prior incomplete and future interrogatory responses, answers to requests for admission responses, and/or testimony related to the accused

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<sup>1</sup> A plaintiff is not required to address every factor in determining a reasonable royalty. *See, e.g., Whitserve, LLC v. Computer Packages, Inc.*, 694 F.3d 10, 31 (Fed. Cir. 2012).

products. For further detail, Singular incorporates by reference its future damages expert report(s) and deposition testimony taken and to be taken in this matter.

With respect to related data points, the identification of license agreements that are technologically and economically comparable to the asserted patents and the license that would result from the hypothetical negotiation is subject to the opinions of Singular's technical expert(s) and damages expert. To date, Singular has not granted any licenses under the patents-in-suit, and Google has failed to produce any relevant license agreements (although given Google's size and business activities relative license agreements must exist). Singular's damages expert(s) will review any relevant license agreement(s) produced by Google and determine the rates paid by Google for licenses under any comparable patents.

With respect to financial data related to the sales and profitability of the accused products and the financial benefits that Google anticipated receiving or has received from its infringement, Singular anticipates that these benefits may be measured by cost savings related to datacenter related expenditures, and/or incremental profits related to Google products and services that use the accused products. A royalty may be measured based on the cost savings derived from the infringer's use of the patented inventions. *See, e.g., Prism v. Sprint*, 849 F.3d at 1375-77; *see also Monsanto Co. v. McFarling*, 488 F.3d 973, 980-81 (Fed. Cir. 2007). To date, Google has failed to provide the requested documentary evidence regarding these factors.

While Singular's review of the existing partial document production is ongoing, Singular notes the following regarding Google's anticipated and actual financial benefits from its alleged infringement:

- As set forth in the Amended Complaint, based upon current knowledge, Singular believes that, as of the date thereof, the savings derived by Google from not having to build additional datacenters or expanding existing datacenters amounts to no less than \$10 billion. See Amended Complaint, ¶ 24.

- Google has installed and operates the accused products in Google's datacenters for Google's own use and makes the devices available for use by others for a fee. *See, e.g.,* <https://cloud.google.com/tpu/docs/tpus>.

The following additional documents are expected to be among those analyzed by Singular's damages expert(s) in connection with the evaluation of Singular's damages:

GOOG-SING-00000387-415, GOOG-SING-00004490-587, GOOG-SING-00006062-089, GOOG-SING-00013382-393, GOOG-SING-00026403-489, GOOG-SING-00026490, GOOG-SING-00026526, GOOG-SING-00026687-758, GOOG-SING-00026944, GOOG-SING-00026944-946, GOOG-SING-00027474-476, GOOG-SING-00027477-478, GOOG-SING-00027590-661, GOOG-SING-00028335, GOOG-SING-00028408-431, GOOG-SING-00029750-761, GOOG-SING-00040471-476, GOOG-SING-00041189, GOOG-SING-00044323-330, GOOG-SING-00045457-491, GOOG-SING-00046240-301, GOOG-SING-00075293-311, GOOG-SING-00078853-929, GOOG-SING-00084896-091, GOOG-SING-00104357-379, GOOG-SING-00112174-208, GOOG-SING-00135443-501, GOOG-SING-00148153, GOOG-SING-00170138, GOOG-SING-00197321-357, GOOG-

SING-00214302-337, GOOG-SING-00216966-043, GOOG-SING-00217749-806, GOOG-SING-00220102-152, GOOG-SING-00222390-425, GOOG-SING-00235662-696, GOOG-SING-00235697-701.

As stated in its Initial Disclosures, Singular also requests enhanced damages pursuant to 35 U.S.C. § 284 as a result of Google's willful infringement described, *inter alia*, in the Amended Complaint, Google's answers to Singular's interrogatories, and deposition testimony. As also set forth in its Initial Disclosures, Singular further requests that the Court award Singular its attorneys' fees, costs and expenses incurred herein.

Dated: May 13, 2021

/s/ Paul J. Hayes

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**CERTIFICATE OF SERVICE**

I certify that on May 13, 2021, I served this document on Google LLC by causing a copy to be sent via electronic mail to its counsel of record.

/s/ Paul J. Hayes